Smarter Security

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Architectural & Electrical Specification

Door Detective® Compact

PART I – GENERAL

1.01 CSI MASTER FORMAT SECTIONS

A. Section 28 10 00 Electronics Access Control and Intrusion Detection
B. Section 28 16 00 Intrusion Detection

1.02 REFERENCES

A. The Tailgate Detection System must be CE marked in accordance with following the European Directives.
   1. Electromagnetic Compatibility EU Directive 2004/108/EC
   2. Low Voltage EU Directive 2006/95/EC

1.03 QUALITY ASSURANCE

A. Manufacturer must operate a Quality Management System that meets the ISO 9001:2008. International Standard for design, development, and manufacturing activities, including associated software products.
B. Manufacturer shall be a global supplier specializing in the design and manufacture of tailgate detection systems with a minimum of twenty (20) years' experience.
C. Installer shall have a minimum of three (3) years' experience installing Door Detective tailgate detection products or similar equipment or shall supply a manufacturer-trained technician for Site Certification & Training following installation of the Door Detective.

1.04 SUBMITTALS

A. Submit manufacturer's product literature including datasheet and drawing pack for specific model, including options.
B. Provide high resolution photo.
C. Provide, upon request, Door Detective Installation & Maintenance manual.
D. Provide, upon request, site specific drawings detailing product placement, arrangement and wiring.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver equipment and materials to specified location in manufacturer's packaging undamaged, complete with installation instructions.
B. Store off ground, under cover, protected from weather and construction activities. For periods of extended storage the equipment will be kept in an environment that regulates temperature and humidity.

1.06 PROJECT/SITE CONDITIONS

A. Install Door Detective on a single or double door frame, and in strict accordance with manufacturer's installation chapter in the provided Installation & Maintenance manual.

1.07 WARRANTY:

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of optical turnstile system that fails in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following: faulty circuit boards (PCB), infrared beams and power supply modules.

PART II - PRODUCTS

2.01 MANUFACTURER

A. Integrated Design Ltd, United Kingdom
Smarter Security, Inc. is the exclusive distributor in North America and also distributes Door Detective products in Central and South America.
110 Wild Basin Road, #200, Austin, TX 78746, USA
Tel: (512) 328-7277 Fax: (512) 328-7280 Web: www.smartersecurity.com

2.02 PRODUCT

A. Door Detective Compact model NO SUBSTITUTIONS.

2.03 CONSTRUCTION

A. Exterior:
   1. The enclosure comprises of Stainless Steel 304 grade 240 grit (satin #4) horizontal grain.
   2. Clear frosted windows are provided for a combined function of providing a status display and to facilitate the Infrared beams.
   3. Plastic top and bottom caps are fitted; the top cap has an aesthetic decal.

B. Interior Chassis:
   1. Chassis framework shall be Aluminum.
   2. The Chassis provides the mounting of the Printed Circuit Boards.
   3. The Chassis provides a means of securing the unit to the Wall/Door Frame.

C. Enclosure:
   1. Dimension: Height 11.9“ (302mm), Width 2.4”” (61mm), Depth 4.3” (109mm)
   2. Unit weight 11.4lbs (5.5Kg).
   3. Unit enclosure shall provide an Ingress Protection rating of IP50.

D. Remote Door Detective Control Unit:
   1. Dimension: Length 7.1“ (180mm), Width 5.1” (130mm), Depth 3” (75mm)
   2. Polycarbonate enclosure
   3. Unit enclosure shall provide an Ingress Protection rating of IP66

2.04 EQUIPMENT

A. General: The tailgate detection system shall consist of two units mounted on either side of a door or corridor. The function of each unit is to provide a number of infrared beams to monitor the movement of people through doorways Although optical operation is possible up to 98” (2.5m), the tailgate detection system shall be installed at a suitable separation so as to deter side by side entry and encourage single file traffic, while maintaining suitable width for wheelchair movements. For ease of integration the tailgate detection system shall control the door locking mechanism (if fitted) and shall monitor that door position switch (if fitted).

B. Capabilities:
   1. To detect unauthorized persons entering through the protected door.
   2. Detect unauthorized persons that are “tailgating” or “piggybacking” more than 2” (50mm) at waist height, behind an authorized person.
      a. Detect unauthorized persons moving at pedestrian speeds up to 9.8’ (3 m) /second.
   3. To process a high number of people without security guard intervention, unless access is rejected by the system or a system anomaly occurs.
   4. Detect direction of movement, that is, entry and exit.
   5. Verify entry into the protected area following authorization.
   6. Provide alarm outputs on detection of a violation by means of:
      a. Local sounder
      b. Remote sounders
   7. Operate in bi-directional, single direction, no entry or free access modes.
   8. Minimize false alarms through the use of infrared beams connected to intelligent detection algorithms.
   9. Buffering multiple inputs from an access control system to maximize throughput.
   10. Allow free movement for wheelchair users with ADA width lanes.
   11. Entry and exit with an authorized card, biometric, or other credential.
   12. Obstruction of an infrared beam path causing an alarm.
   13. To integrate to the door lock, door position contact, access control system and REX button (if required).
   14. Provide door held open alarm function.
   15. Anti-crawl beam feature using additional Units.
   16. Provide population counting with Fastlane Touchscreen Accessory.

C. Door Detective Optical System
   1. Up to 6 intelligently monitored infrared beams.
   2. Access request transaction speed: Time delay of no greater than 100ms in signaling passage through the beams and readying the turnstile for the next user except when a greater delay is caused by the attached access control system.
      a. The optical system must be capable of throughput of up to 1 person per second.
   3. Visitor Management System: Allows an unlimited number of people to pass through the lane. Unit automatically resets to standard operation after passage of last visitor in group.

D. Inputs:
   1. Entry Request: Normally Open dry contract. Closing on request for <1 second
   2. Exit Request: Normally Open dry contract. Closing on request for <1 second
   3. Entry Visitor Request: Normally Open momentary closing switch contacts
   4. Exit Visitor Request: Normally Open momentary closing switch contacts
   5. Door Sense Contacts

E. Outputs:
   1. Voltage-free relay contacts rated 24Vdc @ 500mA for alarm indication and to provide turnstile and entry and exit door emulation.
   2. Output to Access control System:
      a. Access monitoring (used as confirmation of access after authorization)
         i. Entry: Normally closed (opening for 1s)
         ii. Exit: Normally closed. (opening for 1s)
      b. Alarm : Normally closed
      c. Fault Alarm: Normally closed

3. Output to Lock
    a. Relay energized to lock (closed contacts) to be used to switch lock power supply.
4. Audible Alarms:
    a. Local alarm sounders.
5. Status Display:
    a. Standby – White
    b. Please Proceed – Green
    c. Visitor Access – Flashing Green
    d. Alarm Condition - Red

F. Power Requirements:
1. 12Vdc supply is provided to the Control Unit.
2. Power consumption approx. 0.5A (excluding Lock Power).
3. Lock Power requires separate connection between lock and Power Supply Unit.

G. Wiring Requirements:
1. 12Vdc Power: The Control Unit requires 12Vdc at 0.5A from the In-Line Power Supply Module (provided by the manufacturer) using a 2 core cable with a minimum conductor cross sectional area of 18 AWG (1mm^2).
2. Door Detective Signals & Power: A 32ft (10m) terminated CAT5 cable is supplied to provide the connection between the each of the Door Detective Units and the Control Unit.
3. Lock Power: a 2-conductor cable is required to provide Power Supply to the electromagnetic or strike lock with a series connection of the Door Detective Lock Relay contacts. A minimum conductor cross sectional area of 1.5mm^2 (16 AWG) is recommended.
4. Door Contact: a 2-conductor cable with a minimum conductor cross sectional area of 0.35mm^2 (22 AWG) is recommended.
5. The Access Control Lane Integration is provided to the Control Unit, a 10-conductor cable with a minimum conductor cross sectional area of 0.35mm^2 (22 AWG) is recommended for the Access Control Integration.

2.05 FACTORY TESTING

A. The Door Detective shall soak tested for a period of 48 hours at a minimum to ensure proper operation and electrical connectivity. System shall be inspected for mechanical, electrical and aesthetic condition prior to packaging and shipment.

2.06 SECURITY EQUIPMENT

A. Card Readers: System compatible with major access control technologies for owner-provided card readers of suitable dimensions to be mounted onto the Wall.
B. Door Closer mechanism should be fitted to the door.
C. A fail safe (unlocked de-energized) Lock is required to secure the door.

2.07 SUSTAINABILITY

A. The product is recyclable at end of life. The following materials are to be distributed to appropriate recycling facilities resulting in a very low residual waste of non-recyclable material.
1. Stainless Steel (sheet material 0.8mmm thickness)
2. Aluminum
3. Plastics
4. Printed circuit boards
5. Special components e.g. power supply modules

B. The product is supplied on reusable plastic pallets with recyclable carton packaging comprising of the following materials.

1. Corrugated fiber board
2. Foam
3. Polyethylene

PART III – EXECUTION

3.01 SITE EXAMINATION

A. Inspection: Installer / Integrator shall examine the installation and advise the contractor of any site conditions unacceptable for proper installation of product.
B. Installation: Door Detective shall be installed in accordance with manufacturer's Installation & Maintenance manual.
C. Setup & Adjustment: Installer / Integrator shall perform initial equipment electronic adjustments to ensure proper performance after installation.
D. Cleaning: Clean metal, acrylic and glass surfaces carefully after installation to remove excess caulk, dirt, and labels.

[Smarter Security reserves the right to change this specification without notice.]

END OF SECTION